

## ABSTRACT

5                   **Channel Estimation in a  
Multi Carrier Transmit Diversity System**

A method and a stage (60) for estimating channel coefficients  
in a multi carrier system operating in accordance with a block-  
10 code based transmit diversity scheme, in which a data content  
of a code matrix is multiplexed in a frequency domain are  
described. The method comprises determining a phase ramp ( $\varphi_{est}$ )  
in the frequency domain or an equivalent ( $\Delta t$ ) thereof in the  
time domain, the phase ramp ( $\varphi_{est}$ ) or the equivalent ( $\Delta t$ )  
15 thereof being comprised within a receive signal ( $\mathbf{Y}$ ) after  
timing synchronization, processing the receive signal ( $\mathbf{Y}_{\Delta t}$ ) to  
remove the phase ramp ( $\varphi_{est}$ ) or the equivalent ( $\Delta t$ ) thereof and  
estimating the channel coefficients on the basis of the proc-  
20 essed receive signal.

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(Fig. 11)

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